which includes, as one embodiment, a gene encoding α1-6 fucosyltransferase and including a gene encoding an amino acid sequence depicted in Sequence Listing, SEQ ID NO:10. A different embodiment thereof is a gene encoding α1-6 fucosyltransferase inclusive of nucleotide sequence depicted in Sequence Listing, SEQ ID NO: 9. A further aspect of the present invention is a gene encoding α1-6 fucosyltransferase and including a nucleotide sequence from 198th adenine to 1922nd adenine as depicted in Sequence Listing, SEQ ID NO:9.--

In the Claims:

Please cancel claims 1-26 without prejudice.

Please add the following new claims:

27. An isolated, porcine α1-6 fucosyltransferase having the following physico-chemical properties:

(1) action: transferring fucose from guanosine diphosphate-fucose to a hydroxy group at 6-position of GluNAc closest to R of a receptor (GlcNAcβ1-2Manα1-6)(GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlucNAc-R wherein R is an asparagine residue or a peptide chain carrying said residue, whereby to form (GlcNAcβ1-2Manα1-6)-(GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlucNAc-R

(2) optimum pH : about 7.0

(3) pH stability : retains activity after 5 hours of treatment at 4°C at

a pH range of 4.0-10.0

(4) optimum temperature : about 30-37°C

(5) inhibition or activation : no requirement for divalent metal for expression of activity; no inhibition of activity in the presence of 5 mM EDTA

(6) molecular weight: about 60,000 by SDS-polyacrylamide gel electrophoresis.

28. The α1-6 fucosyltransferase of claim 27, which is purified from porcine brain.

29. The α1-6 fucosyltransferase of claim 27, which is recombinantly produced.

30. An isolated polynucleotide encoding amino acid sequence as depicted in Sequence Listing, SEQ ID NO:2.

31. The isolated polynucleotide of claim 30, comprising a nucleotide sequence as depicted in Sequence Listing, SEQ ID NO:1.

32. An expression vector which comprises the isolated polynucleotide of any one of claims 30-31.

33. A transformant cell obtained by transforming a host cell with the

expression vector of claim 32.

34. A method for producing a recombinant α1-6 fucosyltransferase, comprising culturing the transformant cell of claim 33, and harvesting the α1-6 fucosyltransferase from a culture thereof.

35. A recombinant α1-6 fucosyltransferase produced according to the method of claim 34.

36. An isolated polynucleotide encoding α1-6 fucosyltransferase derived from porcine tissue, having the following physico-chemical properties:

(1) action: transferring fucose from guanosine diphosphate-fucose to a hydroxy group at 6-position of GluNAc closest to R of a receptor (GlcNAcβ1-2Manα1-6)(GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlucNAc-R wherein R is an asparagine residue or a peptide chain carrying said residue, whereby to form (GlcNAcβ1-2Manα1-6)-(GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlucNAc-R

(2) optimum pH : about 7.0

(3) pH stability : stable in the pH range of 4.0-10.0 by treatment at 4°C for 5 hours

(4) optimum temperature : about 30-37°C

(5) inhibition or activation : no requirement for divalent metal for expression of activity; no inhibition of activity in the presence of 5 mM